

REMARKS

I. Introduction

Claims 1-8, 12-15, 18, 19, 21, 23 and 25-28 are currently pending in this application. Claims 1, 18 and have been amended, support for which is provided in the instant specification, for example at page 19, lines 17-19. Claim 15 has been amended to provide proper antecedent basis for the claim elements. Claims 25-28 have been added. Claim 25 is supported in the instant specification, by the original claims along with the specification, for example at page 20, lines 11-3. Claims 26-28 are supported by original claims 2, 3 and 14 respectively. No new matter has been added by this amendment.

For the following reasons this application should be allowed and the case passed to issue.

II. Claim Rejections under 35 U.S.C. § 112, second paragraph

Claim 15 was rejected under 35 U.S.C. § 112, second paragraph as allegedly being indefinite for failing to point out and distinctly claim the subject matter regarded as the invention. The Examiner asserts that the term “respective flanges” lacks antecedent basis. Applicants respectfully submit that the claim has been amended, and thereby obviates the rejection.

III. Claim Rejections under 35 U.S.C. § 103(a)

Claims 1-8, 12, 14, 15 and 21 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Antier et al., U.S. 7,051,888 in view of Tansey U.S. 5,782,369 and Culley U.S. 6,926,162. Applicants respectfully disagree. However claim 1 has been amended as supported by Figs. 1 and 3 and the specification page 19, lines 17-19. Claim 1, now recites in pertinent part,

“wherein an undercut is formed on the inner surface of the support ring above the rib, the undercut providing an abutment surface and defining an upper extremity of a region of the body portion that is thinner than the body portion immediately above and below that region; and wherein the abutment surface provided by the ***undercut is substantially at right angles to the inner surface of the support ring*** and bears on the upper surface of the retaining flange of the container on relatively downward movement of the support ring on the end portion and so resists that downward movement.” [Emphasis added].

In order to establish a *prima facie* obviousness rejection under 35 U.S.C. § 103(a), basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must not be based on applicant’s disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Further, “rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *In re Kahn*, 441 F. 3d 977, 988 (Fed. Cir. 2006).

As an initial matter, neither of the prior art references disclose the above cited structural configuration.

For example, as shown in FIGS. 1 and 3, undercut 38 is formed on the inner surface of the support ring 30 above the rib 33, the undercut 38 providing an abutment surface and defining an upper extremity of a region of the body portion that is thinner than the body portion immediately above and below that region; and wherein the abutment surface provided by the undercut is substantially at right angles to the inner surface of the support ring 30 and bears on

the upper surface of the retaining flange 22 of the container on relatively downward movement of the support ring 30 on the end portion and so resists that downward movement.

Neither Antier, Tansey or Culley teach such a structure.

The Examiner at page 2 of the office action concedes that Antier is silent regarding a second sealing portion and an undercut on the support ring.

Further, claim 1 defines a skirt portion as “*depending from the top portion to an end distal the top portion,*” and “a support ring which is hingedly connected to said skirt portion.” See Fig. 2, in which support ring 30 is hingedly connected to skirt 12 of top portion 11.

In contrast, Antier describes a closure having a skirt 12 and a lid 11, with the lid 11 being attached close to the top end of the skirt 12 via two elastic lamellae. The location of the lamellae in Antier is quite different to what is recited in claim 1 as Antier describes that “[t]wo elastic lamellae 15 and 15’ connect the lid 11 and the skirt 12.” (See col. 3 lines 65-66 and Fig. 4 of Antier).

As such Antier fails to disclose a skirt portion *depending* from the top portion to an end distal the top portion, said top portion and skirt portion defining a cavity; a support ring which is hingedly connected to said skirt portion

Tansey discloses a *threaded* closure, and at a minimum, Tansey fails to disclose an undercut which is substantially at right angles to the inner surface of the support ring.

The Examiner asserts that Culley teaches that it is known to provide an undercut on the support ring to limit downward movement of the closure when applied to a container. However, Culley does not teach or suggest an undercut which is substantially at right angles to the inner surface of the support ring as claimed.

Moreover, it would not have been obvious to one having ordinary skill in the art at the time of the invention, to modify the prior art references to incorporate an undercut which is substantially at right angles to the inner surface of the support ring as claimed, as the recited structure has the unexpected advantage of serving to hold the support ring in position on the end portion of the container, especially when the skirt is moving from the closed to the opened position. (See Specification page 19, lines 19-24.

Furthermore, the support ring of the type defined in claims 1 and 18 provides unexpectedly better support to the closure. This particularly strong support would not be expected from a closure lacking an internal thread for support on the neck of the container as defined in claims 1 and 18.

Therefore, none of the prior art references, either alone or in combination teach all of the elements of claim 1.

Accordingly, it is respectfully submitted that claim 1 is allowable

Claims 2-8, 12-15 and 21 depend from and further define claim 1, and therefore are allowable.

Claim 13 was rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Antier in view of Tansey and Culley and further in view of Sondal U.S. 4,860,907.

As discussed above in reference to claim 1, neither Antier, Tansey or Culley teach all of the elements of claim 1, and at a minimum, none of the references teach that,

“wherein the abutment surface provided by the ***undercut is substantially at right angles to the inner surface of the support ring*** and bears on the upper surface of the retaining flange of the container on relatively downward movement of the support ring on the end portion and so resists that downward movement.”
[Emphasis added].

Sondal fails to cure the deficiencies Antier, Tansey and Culley, Sondal also does not disclose the above claim element.

Moreover, one having ordinary skill in the art would not have modified the combination of prior art references in such a manner as to produce a closure device wherein the abutment surface provided by the undercut is substantially at right angles to the inner surface of the support ring. The recited structure has the unexpected advantage of serving to hold the support ring in position on the end portion of the container, especially when the skirt is moving from the closed to the opened position. (See Specification page 19, lines 19-24.

Therefore, neither Antier, Tansey, Culley or Sondal, either alone or in combination, teach all of the elements of claim 1.

Accordingly, claim 1 is allowable.

Furthermore, claims 2-8, 12-15 and 21 depend from and further define claim 1, and therefore are also allowable.

Claims 18, 19 and 23 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Antier in view of Culley. Applicants respectfully disagree. However, in the interest of expediting prosecution, claim 18 has been amended to recite in pertinent part,

“wherein the undercut defines the upper extremity of a region of the body portion that is thinner than the body portion immediately above and below that region; and wherein the abutment surface provided by the undercut is substantially at right angles to the inner surface of the support ring and bears on the upper surface of the retaining flange of the container on relatively downward movement of the support ring on the end portion and so resists that downward movement.”

As discussed above, claim 1 also recites that “the abutment surface provided by the undercut is substantially at right angles to the inner surface of the support ring.”

Moreover, as discussed above in reference to claim 1, at a minimum, neither Antier Culley disclose such a device as claimed.

Furthermore, it would not be obvious to one having ordinary skill in the art to modify the references in such a way as to arrive at the structure as recited in the claims, as this has the unexpected advantage of serving to hold the support ring in position on the end portion of the container, especially when the skirt is moving from the closed to the opened position. (See Specification page 19, lines 19-24.

Accordingly, claim 18 is allowable over the prior art.

Furthermore, claims 19 and 23 depend from and further define the subject matter of independent claim 18, and therefore are also allowable.

IV. Claim 25

Claim 25 recites,

A closure suitable for attachment to a container having an end portion having an inner surface, an outer surface and a free end defining an opening of the container, the outer surface having spaced and parallel first and second retaining flanges each spaced a respective distance from the free end, the closure comprising:

- a top portion;

- a skirt portion having an unthreaded inside surface and depending from the top portion to an end distal the top portion, said top portion and skirt portion defining a cavity;

- a support ring which is hingedly connected to said skirt portion;

- a first sealing portion depending from the top portion and having a cylindrical inner surface; and

- a second sealing portion separated from the top portion by the inner surface of the first portion and which, prior to attachment of the closure to the container, extends at least inwardly into said cavity for a length to a free edge positioned inwardly of the skirt portion;

wherein the length of the second portion is such that, during attachment of the closure with the end portion of the container, the end portion of the container contacts the second portion and pushes it upwardly and at least towards the first sealing portion of the closure to form a seal between the end portion of the container and the closure;

wherein the support ring comprises a generally cylindrical body portion having a free edge and a rib extending inwardly from an inner surface of the body portion that provides a lip having an inner free edge and wherein once the support ring is attached to the end portion of the container, the lip engages under the first retaining flange extending outwardly from the end portion of the container and the free edge of the support ring abuts the second retaining flange, such that the

support ring is held in position on the end portion between said spaced retaining flanges; and

wherein the closure is also provided with an annular bead on the inside surface of the skirt portion that is engageable with a corresponding annular bead positioned on an external surface of the end portion of the container between said container free end and the first retaining flange.

Claim 25 requires that the outer surface of the container have spaced and parallel first and second retaining flanges. The skirt portion is defined as having an unthreaded inside surface and the support ring is defined such that when the lip engages under the first retaining flange of the container, the free edge of the support ring abuts the second retaining flange. As such, it will be understood that the support ring has a height such that the support ring is held in position on the container between the spaced parallel retaining flanges. This is depicted in the drawings and discussed in the specification (see page 20, lines 11-13).

Moreover, the unthreaded closure defined in claim 25 is provided with an annular bead that is engageable with a corresponding annular bead on the container. This annular bead is defined as being positioned on the external surface of the end portion of the container between the free end of the container and the first retaining flange. This feature is supported by current claim 13, and an illustrative example is shown, for example by reference numeral 17 in Fig. 1.

It is respectfully submitted, that a closure having this combination of features is not depicted in the citations noted by the Examiner. At a minimum, none of the citations disclose an arrangement wherein the support ring, once the closure is attached to the container, is positioned between two spaced parallel respective flanges on the external surface of the container, with the flanges being spaced some way from the free end of the container.

For example, in Figure 6 of Antier, it is clear that skirt adjacent rib 121 does not and cannot abut the unlabelled flange that is depicted positioned on the external surface of the container below flange 21 at the same time as rib 121 is in contact with flange 21.

There is also no description in this citation of an annular bead being positioned between the flange 21 and the free end of the neck portion of the container that would be engageable with an annular bead on the inside surface of the skirt portion of the container. In Antier *et al*, what would be considered the skirt portion of the closure cannot be said to be hingedly connected to a support ring as, instead, the closure simply has a lid that is hingedly connected to the skirt adjacent the free edge of the end portion of the container.

The features missing from Antier are not disclosed by Tansey nor Culley. Indeed, Figure 2 of Culley makes it clear that the free edge of the tamper evident band is not in abutment with a flange provided on the container. Rather, the band simply relies upon an inwardly extending rib engages under an appropriate member on the outside of the container.

Applicants further submit that a person skilled in the art would not be driven to combine the documents to come to the claim as proposed above. The present arrangement provides a particularly effective technique for stabilising the closure of the type defined (ie one having a planar top, an unthreaded skirt portion extending therefrom and a sealing rib) on the end portion of the container. The ability of the support ring to be held between the respective spaced flanges does allow the closure to continue to maintain a seal with a container, such as a carbonated beverage container, despite the closure not relying upon use of a typical screw thread. As such, it will be appreciated that the present invention addresses problems in the prior art of hinge closures where seals do fail due to the closure not being stably held on the end portion of the container. Again, Antier teaches away from the present invention as it does relies on a different solution of using the skirt portion of the closure itself to support the top and so ensure stability of the closure. The present invention does not have that option as the skirt is part of the hingable portion.

Accordingly, it is respectfully submitted that claim 25 is allowable over the prior art.

Furthermore, claim 26-28 depend from and further define the subject matter of claim 25 and therefore are also allowable.

V. Conclusion

In view of the above amendments and remarks, Applicants submit that this application should be allowed and the case passed to issue. If there are any questions regarding this Amendment or the application in general, a telephone call to the undersigned would be appreciated to expedite the prosecution of the application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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